LINEAR-TO-LOG CONVERTER FOR POWER ESTIMATION IN A WIRELESS DATA NETWORK RECEIVER

A converter to convert an N-bit input in a linear scale to an M-bit output in a logarithmic scale. The converter includes a set of K subrange converters each coupled to a respective

5   number of bits of the N-bit input that represents a subrange of the N-bit input, each subrange converter to convert the subrange into a respective output that would be the M-bit output if the most significant set bit in the N-bit input was in the subrange. The converter further includes a range selector having the N-bit input as an input, to indicate which of the subranges to select for an output, and a selector having as inputs the outputs of the subrange converters

10   and coupled to the range selector to select the output of one of the subrange converters as the M-bit output. In one embodiment, the converters operate in parallel.